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ScienceDirect

Physics Procedia 59 (2014) 1 – 2

Physics Procedia

GAMMA-2 Scientific Workshop on the Emission of Prompt Gamma Rays in Fission and Related Topics

Preface

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Prompt γ-ray emission contributes with 10% to the total energy production in the core of a nuclear reactor and may lead to a dominant heating in and close to the core. From the 10% about 40% is due to prompt γ-rays emitted by fission products. Most of the experimental data that entered evaluated nuclear data libraries have been measured in the early 1970s. And, recent heat calculations based on evaluated γ-ray spectra and multiplicity data for ^{235}U and ^{239}Pu underestimate the prompt heat production by 20% and 40%, respectively. In consequence, OECD-NEA has published an urgent request for new measurements of spectral prompt fission γ-ray data for at least the standard fissile isotopes as ^{235}U and ^{239}Pu. In view of the high urgency of this request the idea emerged to organize a dedicated workshop on the *Emission of Prompt γ-Rays in Fission and Related Topics, GAMMA,* which aims at bringing together the leading scientists in this particular field.

GAMMA-2 is the second edition of biennial workshops focusing on the research on prompt fission γ-rays in fission and related topics and was held in Sremski Karovci, Republic of Serbia, and organized within the Enlargement Initiative of the European Commission. The purpose of this initiative is to open up a platform to scientists from candidate countries to present their activities in both fundamental as well as applied nuclear physics research. The European Commission financed travel and stay for the contributing participants. The scientific workshop attracted 32 participants from which about half were from member states having recently joined the EU and candidate countries.

The scientific workshop attracted participants from leading institutes in Europe and the United States and covered experimental as well as theoretical aspects of prompt γ-ray emission in fission, but also prompt neutron emission and fission-fragment characteristics were discussed. Taking into account the challenging aspect of instrumentation the scope of the workshop included also a dedicated session on γ-spectrometry and instrumentation.

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Selection and peer-review under responsibility of Guest Editor: Mr. Stephan Oberstedt - stephan.oberstedt@ec.europa.eu
doi:10.1016/j.phpro.2014.10.001

On behalf of the organizing team I would like to deeply express our appreciation for the warm hospitality and friendliness of the people in Serbia and to thank our Serbian partners and colleagues for the excellent co-operation. Based on the very positive feedback from all participants we confirm that everybody felt very welcome indeed in this country and, particularly, that everybody valued the social events, where we got the opportunity to learn, amongst other facts, about the long Serbian wine tradition. Of course, we neither do forget the enchanting sightseeing tour in the beautiful landscape of the Fruska Gora region.

A very special "thank you" goes to Ms. Carmen Cabanillas Platero. Without her organization skills the workshop would not have been possible.